

REMARKS/ARGUMENTS

Claims 1-39 were rejected under 35 U.S.C. §112, first paragraph, for allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Reconsideration of the rejection is respectfully requested.

With respect to independent claim 4, the phrase “and a maximum pre-heating temperature with respect to avoidance of magnetite formation” has been deleted from the claim and thus, it is respectfully submitted that the rejection with respect to independent claim 4 has been overcome.

With respect to claims 15 and 16, the phrase in claims 15 and 16, “a respective temperature level, which is lower as compared with the unaffected heating exchange, is adjusted”, indicated to be unclear, has been amended to read “a respective temperature level is lower than a respective temperature level in processes known prior to the invention of the process according to claim 1” in claim 15. The previously mentioned phrase in claims 15 and 16 has been amended to read “a respective temperature level is lower than a respective temperature level in processes known prior to the invention of the process according to claim 4” in claim 16. Antecedent basis for the amendments to claims 15 and 16 is in the specification, for example, on page 5, lines 25-28, page 10, lines 18-23, and on page 11, lines 1-4, and in the drawings, in Fig. 2.

With respect to claim 38, “vapor/carbon ratio” has been amended to read “water vapor/carbonaceous gaseous components ratio” in accordance with the assumption of the Examiner, (Office Action, page 4, lines 3-6).

Claims 4, 15, and 16 were rejected under 35 U.S.C. §112, second paragraph. Reconsideration of the rejection is respectfully requested.

With respect to claims 4, 15, and 16, they have been amended to overcome the rejection.

Claims 1-10, 15, 16, 29-32, 37, and 38 were rejected under 35 U.S.C. §103(a) as being unpatentable over Whipp, U.S. Patent No. 5,082,251. Reconsideration of the rejection is respectfully requested.

Claims 11 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Whipp as applied to claims 4 and 1, and further in view of Meissner et al., U.S. Patent No. 6,488,770. Reconsideration of the rejection is respectfully requested.

Claims 13, 14, 17, 18, 23-26, and 39 were rejected under 35 U.S.C. §103(a) as being unpatentable over Whipp as applied to claims 4 and 1, and further in view of Hillisch et al., (Steel Times International, March 2001, pp. 20 and 22). Reconsideration of the rejection is respectfully requested.

Claims 13, 14, 19-22, and 33-36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Whipp as applied to claims 4 and 1, and further in view of Zeller et al., U.S. Patent No. 6,569,377. Reconsideration of the rejection is respectfully requested.

Claims 27 and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Whipp as applied to claims 4 and 1, and further in view of Whipp, U.S. Patent No. 5,531,424. Reconsideration of the rejection is respectfully requested.

Independent claim 4 has been amended to provide, in part, for, “[a] process for reducing iron ore-containing particulate material...the process comprising: conducting a reducing gas not containing O₂...”. Antecedent basis for the amendment is in the specification, for example, on page 8, lines 25-29, and in the drawings in Fig. 2.

Regarding U.S. Patent No. 5,082,251 to Whipp, it is respectfully submitted that the Examiner has misinterpreted or misunderstood the teachings thereof. According to Whipp, the iron ore is preheated by combustion of natural gas and preheated air, (column 8, line 65, to column 9, line 19). According to the “State Tables”, (columns 21-24), gas stream (31) from the preheating reactor has an oxygen content of 1.5% and contains 0% of the reducing gas components CO and H₂. Consequently, with this process no reduction and thus no formation of magnetite takes place in the preheating reactor. Whipp, therefore, does not need to introduce measures to avoid the formation of magnetite.

According to the present invention, reducing gas (exiting the second particulate pathway reactor) is used to preheat the iron ore in the first particulate pathway reactor. In contrast to Whipp, the “preheating” (=reducing) gas, as claimed in independent claim 4, and, thus, in all the remaining claims which are dependent thereon, does not contain any free oxygen.

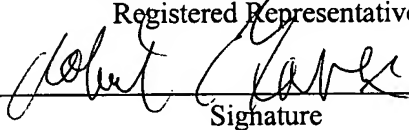
Due to the different mode of operation alone, on the one hand preheating by combustion of natural gas and preheated air and, on the other hand, preheating by means of the reducing gas, the present invention is non-obvious over Whipp. The same applies in consequence to the other references cited in combination with Whipp.

In view of the foregoing amendments and remarks, allowance of claims 1-39 is respectfully requested.

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Date of Signature

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Respectfully submitted,



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